

The Coastal Plainer

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Establishing Super Project Offices

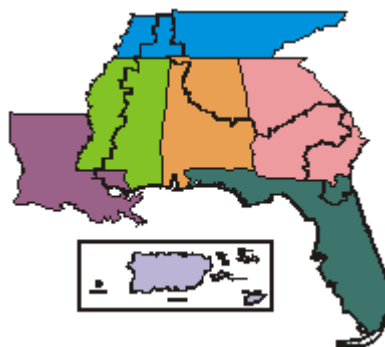
By Charles Love, MO-15 Team Leader

I want to take a moment to express my sincere thanks to the MO-15 team and the Alabama State staff for making my transition from the Midwest to the Southeast region a smooth one. Thank you! During my first 90 days, I spent time traveling and visiting with soil scientists and cooperators within the region. This was an exciting opportunity to see some of the good soil survey activities and special study efforts within MO-15. I hope to visit with other soil survey offices and cooperators in the near future.

At those locations that I visited, many individuals asked me what my vision was for establishing Super MLRA Soil Survey Project Offices in MO-15. As a part of this newsletter, I want to share with you some of my vision and activities for establishing super project offices.

Currently, our soil scientists are located in 33 different offices across MO-15. A few years ago, the MO-15 Board of Directors (which includes the State Conservationists,

MLRA Soil Survey
Region #15



State Soil Scientists, and cooperators) proposed the consolidation of these offices into 16 super project offices. The goal of the new offices was to effectively carry out soil survey activities within larger geographic areas organized by Major Land Resource Area (MLRA). These offices were located across the region based on soil survey workload and other logistic factors.

Some of the management benefits for establishing the super project offices include:

- Reduced relocation costs,
- Reduced computer hardware and software costs,
- Increased consistency in soil survey products using new technologies,
- Increased stability for the soil scientists,
- Establishment of a career ladder,
- Retention of high-quality soil scientists, and

- Improved marketing of soil science and GIS efforts within the work area.

The soil data quality specialists and I have proposed work-area boundaries for the super project offices (fig. 1). I feel that having these boundaries identified will help us establish very good staffing plans, workload plans, and a long range work plan for soil surveys using super project offices across the region.

We established work-area boundaries based on the following rationale:

- The super project offices should be in the middle of the geographic landforms,

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providing for an easy commute. Ideally, each office would be located within a 75 to 100 mile radius of the most distant counties in the survey area.

- The super project offices should be where the oldest surveys and heaviest workload exist.
- The super project offices should conduct work in multiple MLRAs.
- The super project offices should service 15 to 25 counties within their geographic areas (MLRAs).

The vision for the super project offices is that they will be the storehouse of a permanent, dynamic, growing, soil-information database. Our goal is to have all of our soils data developed digitally and stored electronically. The offices would service the needs of both technical and nontechnical users. The heart of these soil-information centers would be a computerized Geographic Information System, or GIS. All future soil survey update and maintenance activities would be performed from these regional locations.

I recommend that the scope of these offices be broadened to include not only GIS but remote sensing technology functions. The super project offices need to be properly equipped to serve our clients and the users of our products. The offices should have the latest GIS, GPS, NASIS, and EM technol-

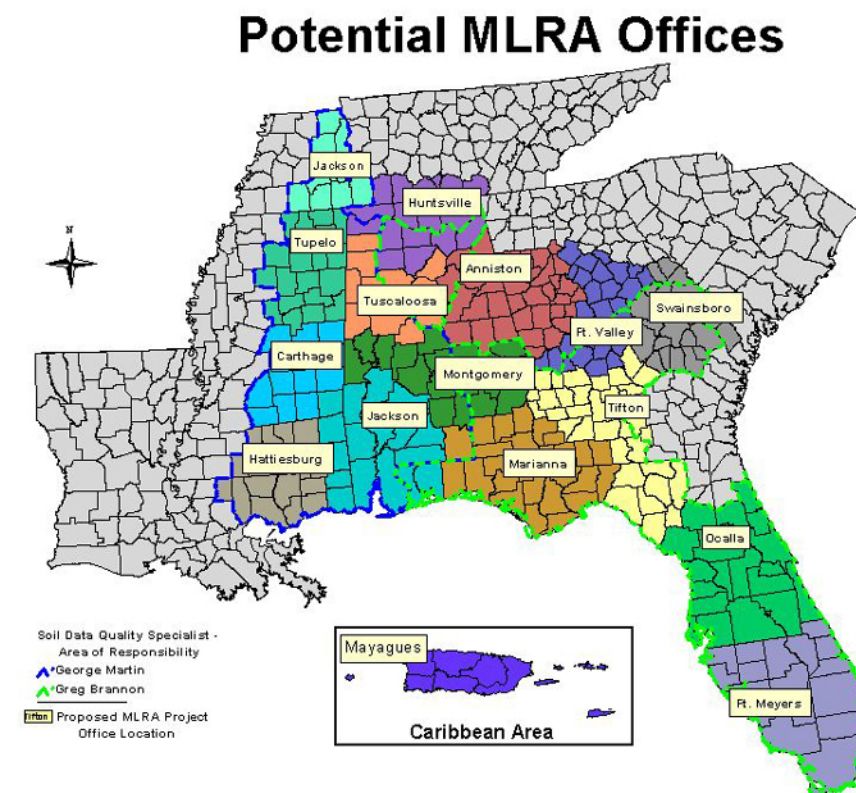


Figure 1.—Proposed super project offices and work-area boundaries.

ogy; and they should provide a quality work environment that enables soil survey activities to be incorporated into the technical aspects of the NRCS mission.

When established, the super project offices will be 100 percent responsible for the quality control of the field data used for soil correlation activities, NASIS database development, map compilation and digitizing for SSURGO certification, and manuscript preparation. The super project offices will be required to meet the soil survey inventory needs of both our internal and external customers. There are

five main phases of work for the super project offices within MO-15.

The super project offices will:

1) Complete the initial mapping and correlation activities as assigned by each State Soil Scientist in MO-15.

2) Recompile old soil surveys for all counties within the MLRA work area. Initial recompilation and digitization can begin at anytime and is not dependent on completion of some other process, i.e. field work, soil correlation, etc.

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The Caribbean National Forest

By Gregory R. Brannon, Soil Data Quality Specialist

The manuscript for the soil survey of the Caribbean National Forest (CNF) in Puerto Rico has been completed, and the interim survey is on the Web. The survey has been a joint effort involving many different agencies, offices, and people.

The main challenge remaining is to find a suitable photographic background to use in the maps for publication. Most of the CNF is shrouded in clouds, and obtaining quality imagery is a challenge. A small window of opportunity for obtaining decent imagery (hopefully) will be open from late February to the end of March, which is the driest period.



A view from a waterfall on the Rio Blanco River on the south side of the CNF looking toward the Caribbean Sea.

The CNF is the only tropical rain forest in the U.S. Forest System. Rainfall in the CNF ranges from about 80 inches per year in the lower elevations up to 200 inches

or more in the highest elevations. This distribution of rainfall results in hydric soils predominating in the higher elevations in contrast to the lower elevations. ■



A small natural pool on the Rio Blanco.

The interim Soil Survey of Caribbean National Forest and Luquillo Experimental Forest, Commonwealth of Puerto Rico, is now available online at http://www.statlab.iastate.edu/soils/soildiv/surveys/pr_cnf.pdf

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3) Create a digitized soil survey for those counties within the work area. Although all soil surveys have not been mapped and correlated within MO-15, we must accelerate recompilation and digitizing for published soil surveys to meet the national soil survey digitization efforts.

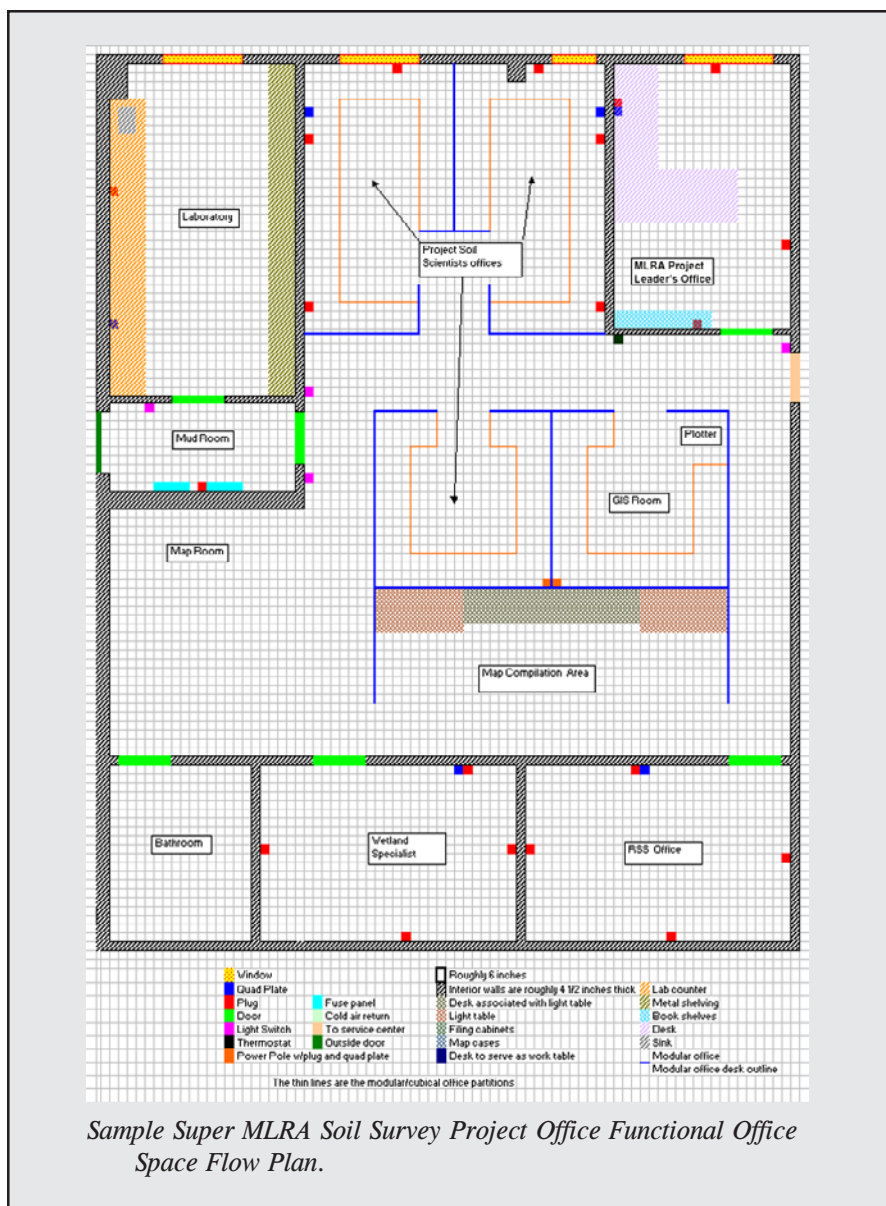
4) Update or perform maintenance on the NASIS database and on all soil surveys in the work area. A number of soil survey publications are outdated in MO-15. This means that the soil information no longer satisfies our customers' needs. For many of our NRCS programs—E-FOTG, RUSLE2, Win-PST, MMP, Veg-Spec, WHIP, EQIP, CRP, AFO, CAFO, WRP, and urban growth concerns—additional soil information is needed to address issues related to water and air quality. I feel the future of the Soil Survey Program depends on developing a strong NASIS database to facilitate and implement NRCS technical programs. Our state technical soil service specialists and resource soil scientists must be involved in reviewing and validating NASIS data in relation to NRCS conservation programs. Technical soil services are the presentation of NRCS Soil Survey data.

5) Provide a digital product using the “modern soil survey” data already published. We are providing a

compact disk (CD) of each county that is Soil Survey Geographic Database (SSURGO) certified. The SSURGO product consists of geo-referenced digital spatial data that has been recompiled to a corrected base (orthophotoquad or orthoquarterquad), attribute data, and metadata.

Our super project offices will have responsibility for the production of digital spatial and attribute data.

The new technology means we need more diverse skills and expertise to effectively achieve the National Cooperative Soil Survey (NCSS) standards and to implement natural resource management efforts and NRCS programs. So, we must go that extra mile to make this concept work. We must be creative, innovative, and proactive in establishing the super project offices in each state. ■



National Resources Inventory (NRI) Update

By Herbert L. Ross, ICCS Leader,
Auburn, Alabama

The transition to a continuous inventory continues in 2002. Several states in the Southeast Region have received their photo imageries; however, Alabama was the first to complete all aerial photography. The sample for the 2002 NRI has been reduced, due to the budget restraints, from approximately 73,500 Primary Sample Units (PSUs) to about 52,500.

There are three major types of PSUs:

1. Core Sample: PSUs that have been studied over the past years but have been reduced.

About 41,500 PSUs observed for the 2000 and 2001 NRIs will be observed again in 2002 using

photo interpretation. Short-term trends can be determined from these.

2. Rotation Sample: PSUs that have been randomly selected for the 2002 study and will be maintained. About 32,000 additional PSUs will be selected for observation by photo interpretation in 2002. These PSUs were not observed in either 2000 or 2001.

3. Onsite Sample: Approximately 4,000 PSUs in the 2002 NRI will be selected for both photo interpretation and onsite data gathering. This number may increase to 14,000 PSUs in future years.

NRI sample sights have been selected for data collection as follows:

	<u>Core</u>	<u>Rotational</u>
Alabama	389	622
Florida	551	848
Mississippi	485	729

The 2002 NRI will be conducted in the same manner as the 2001 study. The data elements are conducted using the same protocols, tools, and methods as last year. As of 2002, ten Inventory Collection & Coordination Sites (ICCS) sites are using some form of digital remote sensing processing and GIS to carry out the data collection process. Five additional sites are transitioning to digital data collection in FY-02. Working in a digital format has proven to be so efficient that all operations are encouraged to migrate as soon as possible. Any nondigital operation will require more time per PSU and is less likely to conduct accurate measurements.

A continuous NRI allows for:

- Up-to-date estimates of resource conditions,
- An NRI that is more relevant to the mission and activities of NRCS,
- Increased efficiency through a permanent staff of highly qualified experts,
- Information to help redirect activities in a timely manner as necessary,
- The ability to track progress along the strategic plan, and
- The ability to measure outcomes of programs.

SO, LETS GET READY TO RUMBLE!!!!!!!!!!!!!! and have all the data collection completed by the end of February 2003. ■

Functional Super Project Office Space Needs

Please refer to the sample Super MLRA Soil Survey Project Office Functional Office Space Flow Plan on page 4. This plan is being used in the Midwest and Western regions to design functional office space. The following estimates are based on the special needs of a super project office serving 15 to 25 counties.

<u>Space Needs</u>	<u>Square Feet</u>
4 employee work stations (4 x 135)	540
3 computer & digitizing stations	120
Unfinished storage	100
MLRA library and map room with three light tables	270
MLRA lab room	150
Soil preparation and storage room	<u>250</u>
Total	1,430 (or more)

Homecoming of Sorts for Henry and Benton Counties Soil Survey Crew

MO-15 finally has a claim to Soil Survey in Tennessee. An update has begun for the Soil Surveys of Henry and Benton Counties, Tennessee. These counties are located along the west side of the Tennessee River in Northwest Tennessee. They make up the northernmost reaches of MO-15. The MOs in Auburn, Lexington, and Little Rock can all lay claim to parts of Henry County, and Benton County is divided almost evenly between MO-15 and MO-18. Throw in a variety of Tennessee River bottom soils and you have an interesting mix of series and landscapes—not to mention a voluminous legend.

Craig Harris is the project leader and began last August. He transferred from Pasquotank County, North Carolina, in MLRA 153B (Tidewater Region). Craig was born and raised in Dickson County, Tennessee, on the Western Highland Rim and is happy to be back close to home. He began his soil survey career in Cheatham County, Tennessee, in July of 1988 and got on with NRCS in February of 1990 in North Carolina. He worked in various locations across the state from the Blue Ridge Mountains to the Tidewater of the Coastal

Plains. Craig has a wife, Alison, and two boys, Ryan 6, and Colin 3.

Currently, David Thomas is the only other NRCS personnel assigned to the survey. David also is coming home to West Tennessee, having been raised in Haywood County. He is a veteran of West Tennessee soils and landscapes but has also worked in various locations across Tennessee. He spent the last 13 years on the Highland Rim in Middle Tennessee.

Interestingly, he and Craig worked together in

Cheatham County way back in the late 1980s. David has a wife, Melinda, and a 4-year-old son, Daniel.

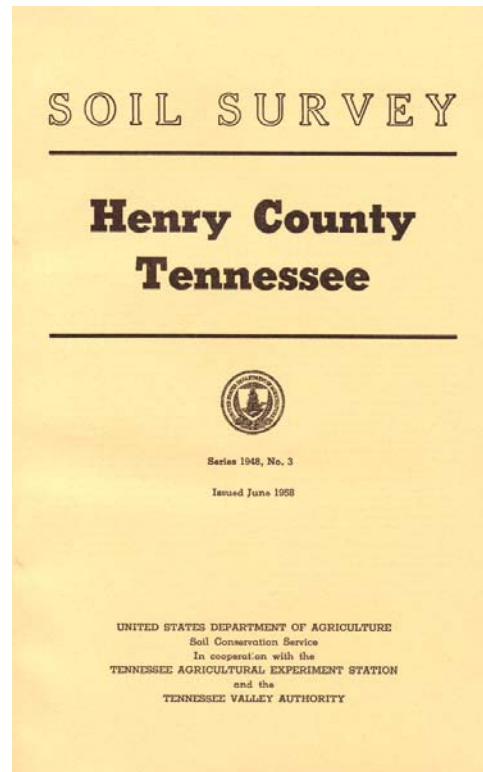
The geology of Henry and Benton counties includes the Highland Rim (MLRA 122); Coastal Plains deposits, such as Coffee Sand, Coon Creek Clay, McNairy Sand, Porters Creek Clay, Wilcox, and Claiborne, and Fluvial deposits (MLRA 133A); and the thick loess deposits of the Southern Mississippi Valley Silty Uplands (MLRA 134). Both counties have a significant proportion of Coastal Plains sediments with thin

loess capping in smoother areas. Smithdale, Lexington, Providence, and Luverne soils will be the dominant upland soils in those areas. In some

areas, thick deposits of fluvial gravel cap the McNairy formation, forming such soils as Saffell, Brandon, and Lax soils. But the similarity just about ends there. Each county has areas that make it unique from the other.

The western part of Henry County is characterized by broad plateaus of deep loess soils on

nearly level to sloping landscapes. The northernmost of the plateaus is the Puryear (PURR-ee-err) Plateau, which extends well up into Kentucky and is, on average, 100 feet high in elevation and has a much higher incidence of fragipans than the plateaus southwest of it. Typical soils there include the Loring and Grenada series—as opposed to the Lexington and Feliciana series that dominate to the southwest.



"Henry and Benton Counties were due a new soil survey, having been published in the early fifties..."

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Benton County lacks the deep loess soils but makes up for it by having an array of Tennessee River flood plain soils and a larger portion of Highland Rim soils. Ironcity, Lax, and Hawthorne soils are expected to be the dominant soils on the Highland Rim uplands. Beason, Wolftever, and Minter soils will probably be the dominant flood plain soils.

Henry and Benton Counties were due a new soil survey, having been published in the early fifties on nonphotographic base. The modern soil survey will be mapped and published on 1:12,000 scale photobase. The two counties combine for an area of more than 600,000 acres and include portions of Kentucky Lake and some small islands. ■

2002 Southern Regional Cooperative Soil Survey Conference

By Julie Best, Public Affairs Specialist, NRCS, Alabama

Soil scientists, university liaisons, representatives from the forest industries, public health departments, private contractors, and others interested in the soils of the southern region gathered at Tybee Island, Georgia, from June 3rd to 5th, 2002, for the Southern Regional Cooperative Soil Survey Conference. Professor Larry

West, University of Georgia, and Edward Ealy, State Soil Scientist for Georgia, arranged the program and coordinated activities.

In the past, the attendees of soils conferences were primarily NRCS soil scientists and the cooperating university soil liaisons. In recent years, however, the group has recognized the potential of working more closely with the forest industry and private consultants. Attendees at the conference included a cross-section of those interested in soil data. All entities had information, issues, and data to share.

So, what was the outcome of the meeting? Soil is a complex subject, and how the soil is described can often be a source of debate. Those attending the meeting identified issues in taxonomy that need review. The private consultants spoke of the use of soil data in the private arena and identified the differences in the data provided by the Cooperative Soil Survey and the data that is needed in the

private sector. The group agreed that they need to work together to bridge this gap. New technologies were addressed, pointing out the advantages as well as the challenges of the new systems.

Mike Lilly and Bill Kingery volunteered to host the conference in Mississippi in 2004.

Larry and Edward arranged for a low country boil—and it was delicious. Soil scientists are a multi-talented lot. Dr. Tom Ammons from the University of Tennessee, Dave McMillen with NRCS in Tennessee, and Jodi Boyce from the University of Georgia did some fine pick'n. It was obvious they were having a good time, and those of us listening certainly enjoyed the bluegrass music.

All in all, it was a good meeting. To borrow Dr. Ammons' musical term, let's "take it on home," show what we can do, finish what we have started, and determine where we need to go from here. ■



The conference attendees at a "low country boil."

Mississippi Welcomes Dr. William Kingery as Liaison

By Mike Lilly, Mississippi State Soil Scientist

Dr. William L. Kingery has been appointed as university liaison to the National Cooperative Soil Survey program. Dr. Kingery (or Billy as he prefers) holds the position of Professor of Agronomy-Environmental Soil Chemistry/Mineralogy at Mississippi State University. He earned his B.S. in Soil Science in 1980 from Louisiana State University; M.S. in Agronomy-Soil Physics in 1984 from Louisiana State University; M.L.S. in 1988 from University of Alabama; and Ph.D. in Environmental Science in 1994 from Auburn University.

His teaching contributes to the Department of Plant and Soil Sciences' educational activities in soil science and environmental quality. Coursework covers soil chemistry and mineralogy, and he has developed two experimental courses: Soils and Environmental Quality and Soils for Landscape Architecture. In addition, he has directed a number of individual studies with students in Agronomy, Chemistry, Chemical Engineering, and Computational Engineering.

His research applies chemical principles to basic studies in

soil science and to problems in contaminate fate and nutrient management. An important aspect of this research derives from collaborations developed across several disciplines and from industry, government, and academia in the U.S. and abroad. Specific interests include formation and reactivity of colloidal organo-mineral complexes in soils; molecular structures and reactivity of natural organic matter; and use of mathematical models and computational simulation to describe nutrient/contamination behavior in soils.

Dr. Kingery is a member of the Soil Science Society of America, American Society of Agronomy, Clay Minerals Society, International Humic Substances Society, Ecological Society of America, Gamma Sigma Delta, and Sigma Xi. He is the author, co-author, or editor of numerous publications and journal articles.

Billy has "hit the ground running" and has already been instrumental in assisting with writing proposals, participating in field reviews, and analyzing soil samples. We welcome his enthusiasm and look forward to working closely with him on many endeavors in the future. ■



Getting Down and Dirty

(A Forces of Change/Global Links exhibit planning workshop)

By Julie Best, Public Affairs Specialist, NRCS, Alabama

On July 15th and 16th, thirty-five individuals from a broad spectrum of backgrounds gathered in Washington at the National Museum of Natural History to brainstorm ideas about a soils exhibit that will be a part of the Global Links exhibit at the Smithsonian. Our charge was to identify the targeted audience, list some main messages, and then suggest ways that these messages could be displayed. The group used the nominal group process to come up with a suggested plan of approach.

The targeted audience was determined to be teachers, children K-12, landusers, city dwellers, the press & other media, and family groups. The main messages the exhibit should depict included:

- What does soil do for us,
- What is soil made up of,
- What can you do to protect soil,
- What lives in soil,
- What are some of the major uses of soil, and
- What do soil scientists do and why?

At this stage of the planning process, money is not an object (what fun!). As you can

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imagine, the suggestions for projecting these messages were varied. The group included people with great abilities to "dream."

The goal of the exhibit is to pique the curiosity of visitors, to influence them to purchase a book about soil, to perhaps guide young children in a career direction, and just to serve as a tool for dialog about one of our most valuable natural resources.

The Memorandum of Understanding for the project is between the National Museum of Natural History and the Soil Science Society of America. Fund raising will be coordinated through the Agronomic Science Foundation. At least \$450,000 is needed to begin the project.

It will be a few years in the making, but a soils exhibit at the Smithsonian is exciting to think about. The exhibit will be in the hallway where 400 people exit the IMAX theatre every hour. The location is just around the corner from the Hope Diamond, the world's most visited museum exhibit. Approximately six million people visit the Smithsonian each year. To reach just a fraction of that number with information about soil is a worthwhile goal. ■

Alabama Welcomes Angela Warden, Soil Scientist

Angela was born and raised in Franklin, Tennessee. She attended the University of Tennessee, Knoxville, where she received a Bachelor of Arts degree and a Bachelor of Science degree in Agriculture. She majored in Religious Studies and Plant and Soil Science with a concentration in environmental science and natural resources.

While in college, she had a variety of jobs. To list a few, she worked in the Dean of Students office, in the Botany Greenhouses, and in the Forage Laboratory at UT. After graduation, she began volunteering as an assistant soil mapper with the Natural Resources Conservation Service in Knoxville and later in the Great Smoky Mountains. She also worked at UT as a Lab Assistant and later as a Lab Technician in the Variety Testing Program where she learned a lot about the seed industry and about growing corn and soybean varieties. Although she thoroughly enjoyed working in the Forage and Variety Testing labs, her heart was in soils. She began working with NRCS as a soil scientist in Crenshaw County, Alabama, in June.

We'd like to welcome Angela to the team and wish her the best of luck. ■



Editor's Note

Issues of this newsletter are available on the Internet on the MO-15 homepage (<http://www.mo15.nrcs.usda.gov/>). Click on "MO-15 Items" and then on "The Coastal Plainer, Quarterly Newsletter."

You are invited to submit stories for future issues to Aaron Achen, editor, MO-15, Auburn, Alabama. Voice—(402) 437-4157; FAX—(402) 437-5336; e-mail—Aaron.Achen@nssc.nrcs.usda.gov.



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